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Male Youth Perceptions of Violent Extremism: Towards a Test of Rational Choice

Theory

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Abstract

Understanding how people perceive the pros and cons of risky behaviors such as terrorism or violent extremism represents a first step in developing research testing rational choice theory aiming to explain and predict peoples' intentions to engage in, or support, these behaviors. Accordingly, the present study provides a qualitative, exploratory analysis of a sample of 57 male youths' perceptions of the benefits and drawbacks of: (a) accessing a violent extremist website, (b) joining a violent extremist group, and (c) leaving such a group. Youth perceived significantly more drawbacks than benefits of joining a violent extremist group ($p = .001$, $d = .46$) and accessing a violent extremist website ($p = .001$, $d = .46$). The perceived benefits of engagement referred to gaining knowledge/awareness, being part of a group/similar people, and fighting the enemy/for a cause. The drawbacks referred to being exposed to negative material and emotions, having violent/criminal beliefs and behaviors, and getting in trouble with the law. The perceived benefits of disengagement referred to no longer committing illegal acts, and regaining independence/not being manipulated. The drawbacks referred to exposing oneself to harm and reprisal. These findings provide an insight into how male youth think about (dis)engagement in violent extremism, and can inform future quantitative research designed to explain and predict (dis)engagement in violent extremism. Eventually, such research may inform the development of evidence-based prevention and intervention strategies.

Keywords: Rational choice, risk perception, violent extremism, terrorism

Male Youth Perceptions of Violent Extremism: Towards a Test of Rational Choice Theory

By contrast to the wealth of theoretical literature on terrorism and violent extremism (e.g., Helmus, York, & Chalk, 2013), there is a dearth of primary research on this topic. As Victoroff (2005) explains, conducting research in this domain can be resource-intensive (e.g., involving fieldwork), potentially dangerous, ethically problematic, and may involve language barriers. In addition, officials may act as gatekeepers for gaining access to incarcerated samples, while active or inactive offenders may have little motivation to be involved in academic research. Thus, policy-makers have had to design and implement counter-terrorism strategies lacking in a sufficient and relevant evidence-base (Dhami, 2014). It is no surprise that consecutive governments, internationally, have found it difficult to effectively prevent violent extremism and intervene as necessary (Lum, Kennedy, & Shirley, 2006). The terrorist threat remains real and high.

In the present paper we suggest that understanding how people perceive the pros and cons of violent extremism represents a first step in developing theoretically-guided research that aims to explain and predict peoples' intentions and decisions to support and (dis)engage in violent extremism. The research reported in the present paper takes this first step by providing a qualitative, exploratory analysis of male youth's perceptions of the benefits and drawbacks of specific behaviors associated with violent extremism. Before describing our approach, we briefly outline the theoretical perspective that our exploratory work can contribute to, and review relevant past research. We also discuss the methodological challenges that we (and other researchers) have faced.

Towards a Rational Choice Perspective on Violent Extremism

An array of psycho-social theories have been proposed to explain violent extremism, including psychopathology (Cooper, 1978), paranoia (Post, 1998), frustration-aggression (Davies, 1973), and strain (Agnew, 2010).[1] However, as Victoroff (2005, p. 33) concludes, "virtually none of them has been tested in a systematic way." This is partly because they are not always amenable to testing due to a lack of precision or specification. In addition, not all theories have clear implications for counter-terrorism policy. The present study was *not* designed to test a specific theory. Rather, it was designed to provide exploratory data that might lead to *future* tests of a rational choice approach to violent extremism.

Rational choice theories employed in psychological and criminological research draw in an approximate manner on the expected utility model in Economics (e.g., Gruber, 2001); extending its focus on *subjective* expected utility. According to this theory, a rational decision-maker (in this case a violent extremist) would decide whether or not to engage in violent extremism by assessing the subjective importance of the possible benefits and drawbacks of engaging in the behavior, in addition to assessing the subjective probabilities of these possible outcomes. The expected utility of the behavior would be determined by the probability-weighted difference between the benefits and drawbacks. The more that the weighted difference favors the benefits, the more likely the decision-maker is to engage in the relevant behavior.[2]

Thus, rational choice theory can help researchers to understand the cognitive process by which an individual makes the above risk assessments and then acts on them. In fact, researchers can test more or less 'rational' models (e.g., Dhami & Mandel, 2012a, 2012b) and examine the moderating or mediating effects of non-cognitive factors, such as emotions, on

the cognitive process. Importantly, both the variables that an individual might consider when thinking about (dis)engaging in violent extremism, and those hypothesized by a researcher as important/relevant, can offer some insights into non-cognitive and even non-psychological components of violent extremism (e.g., social, political or economic factors). In addition, rational choice theory has the attraction of potentially providing clear policy interventions, by, for instance, increasing the costs and reducing the rewards so as to de-motivate offenders (Cornish & Clarke, 1986).

The potential applicability of rational choice theory to violent extremism has been previously noted (Clarke & Newman, 2009). It is clear that violent extremism involves potential positive and negative outcomes (for the individuals involved), whose probability of occurrence is less than certain. Although there has been little research directly asking violent extremists or those 'at risk' of such behavior about what they perceive to be the pros and cons of (dis)engagement in violent extremism, there is some indirect evidence. This comes from research on involvement, engagement or radicalization processes, as well as on disengagement, desistance or deradicalization processes. Much of the research is based on secondary sources such as published (media) reports and criminal justice records of individuals, although some has come from interviews with incarcerated individuals.

The small body of evidence suggests that although violent extremism may also involve significant self-sacrifice from losing connection with family, through experiencing formal sanctions, to death, there are also potential benefits to the individual. For instance, individuals may join terrorist groups because of a need to gain or retain affiliations or social ties (Hegghammer, 2006), or a need for identity and belonging (Borum, 2011). They may also join in order to readdress perceived injustices or grievances that are either personal to

them or directed at a more general level (Borum, 2011; Hegghammer, 2006); to fight for a specific cause (Hegghammer, 2006); or for some political or religious motive (Hegghammer, 2006). Individuals may remain engaged in a group due to increased taking on of the group's beliefs and values, and for group solidarity (McCauley & Moskalenko, 2008).

Finally, individuals may disengage because they no longer agree with the group's ideology or they are dissatisfied with the group's organization. They may also disengage because their personal life circumstances lead them to alter their preferences and priorities (Garfinkel, 2007), or because they are physically separated from the negative peer influences and are faced with more positive influences (Garfinkel, 2007). Individuals may disengage because they become disillusioned because their initial motivations are not realized (Bjorgo, 2011).

In order to conduct tests of rational choice theory that involve asking individuals to assess the subjective importance of potential positive and negative outcomes of violent extremism and their probabilities of occurrence, it is first necessary to identify what the positive and negative outcomes would be. Here, less precise tests might involve simply asking individuals to think of the positive and negatives that come to mind and then assess those (e.g., Dhami & Mandel, 2012b; Hampson, Severson, Burns, Slovic, & Fisher, 2001). However, in such a study, researchers cannot control for the factors that different individuals might assess, and so cannot easily draw conclusions about the predictive utility of any specific factor, which consequently can make it difficult to draw policy implications.

Alternatively, researchers could simply present individuals with an a priori (researcher-drawn) list of positive and negative outcomes (e.g., Beyth-Marom, Austin,

Fishhoff, Palmgren, & Jacobs-Quadrel, 1993). However, this may overlook outcomes that are noticeable to participants or it may prompt participants to respond to outcomes that would not otherwise have been apparent to them. It is thus recommended that researchers elicit participants' perceptions of the outcomes of risky behaviors in order to better understand those mentally available factors that may motivate risk taking in naturalistic settings (e.g., Beyth-Marom et al., 1993; Dhami & Garcia-Retamero, 2012). Therefore, the main aim of the present study was to identify what individuals themselves perceive to be the benefits and drawbacks of (dis)engaging in violent extremism. These findings can then be used in future research to test rational choice theory.

The Present Study

The present study explored male youths' perceptions of the *number* and *nature* of the benefits and drawbacks of (a) accessing a violent extremist website, (b) joining a violent extremist group, and (c) leaving such a group.[3]

Our focus on male youth was informed by research indicating that males are more likely to engage in violent extremism than females, and that those engaged in violent extremism are more likely to be younger than older (Bakker, 2006; see also Monahan, 2012). In addition, we sampled these youth from universities because the 'homegrown' nature of violent extremism has become a particular concern, and evidence suggests that violent extremists may be better educated on average than the population from which they came (Merari, 2010). In fact, the UK Government views universities as a potential 'hotbed' for radicalization (Glees & Pope, 2005; Hannah, Clutterbuck, & Ruben, 2008; HM Government, 2011).

Our focus on (a) accessing a violent extremist website, (b) joining a violent extremist group, and (c) leaving such a group, was guided by the importance of studying different stages of criminal (dis)engagement in order to more precisely test rational choice theory and make more meaningful contributions to policy interventions (Cornish & Clarke, 1986). Indeed, Horgan (2008) notes that there are different stages of engagement in violent extremism, ranging from initial involvement, through committing a violent extremist act, to desistance. The level and/or nature of engagement at each stage can vary. Initial involvement may be as simple as accessing a website or joining an online forum (and this can contribute to the radicalization process). Committing a violent extremist act can range from supporting violent extremism in various ways (e.g., joining an extremist group, providing finances, intelligence, shelter, weapons, recruitment, and training) to committing a violent attack. Desistance can range from reducing engagement with a violent extremist network through to leaving the network altogether, and no longer holding violent extremist views. We have included exemplary behaviors at each stage of engagement mentioned by Horgan (2008). In addition, our selected behaviors and stages are considered by policy-makers to be important for prevention and intervention (HM Government, 2011).

Method

Participants

Fifty-seven male youth were recruited from universities within the UK via university student web-pages (e.g., university social networking pages) and by directly appealing to students on University grounds. All but three of the sample provided some demographic information. Of those who did, the average age was 22 years ($SD = 2.9$). Seventy-one percent described themselves as White-British, and 90.4% said they were British citizens. While 63.5% of the sample said the highest level of education they had achieved to-date was

university, half of the sample were still in university education. Forty-two percent said they were in some form of employment. Twenty-nine percent said they supported the Labour Party and 25.5% supported the Scottish National Party. Finally, only 35.3 % said they did not hold any specific religious belief.

Materials

Participants were instructed to "Close your eyes and vividly imagine that you have [accessed a violent extremist website/joined a violent extremist group/left a violent extremist group]. On each line below, list the potential [benefits/drawbacks] of [accessing a violent extremist website/joining a violent extremist group/leaving a violent extremist group]." Participants were allowed to list up to seven benefits/drawbacks for each behavior. The decision to limit responses to seven was based on previous research showing that the average number of benefits and drawbacks is between four and seven (i.e., Beyth-Marom et al., 1993; Dhami & Garcia-Retamero, 2012). Only four participants reached the maximum number. Participants were not explicitly instructed to think of any specific violent extremist group. This was primarily because we wanted to avoid social desirability response bias, and avoid limiting responses to a narrow definition of extremism i.e., one specific group.

A demographics questionnaire was used to collect data on participant age, ethnicity, citizenship, education level, employment status, political party affiliation, and religious beliefs.

Procedure

The survey was self-administered online. The politically-charged and serious criminal nature of violent extremism can threaten the reliability of responses obtained on the topic,

especially from those who have engaged in it or who are being asked about their intentions to engage in it. Past researchers have suggested that collecting data online and anonymously increases the sense of 'distance' between the participants and researchers, and so can reduce social desirability response bias (Bishop, Cooper, & Hillygus, 2009).[4]

A link to the study was advertised around university campuses using posters and on university or student-specific web-pages (e.g., Facebook groups). Participants were also approached on campuses by the researchers and provided with a paper copy of the link to type into a browser if they wanted to participate. Upon accessing the study website, participants were provided with an introduction to the study, and were asked to complete a consent form. Participants then responded to the qualitative part of the study asking about their perceptions of the potential benefits and drawbacks of accessing a violent extremist website, joining a violent extremist group, and leaving a violent extremist group. Each question was presented on a new page to enhance clarity and to create a 'mental break' between the questions. The order of the items asking about costs and benefits for each behavior (i.e., accessing, joining, and leaving) were counter-balanced across participants. Participants then completed the demographics questionnaire. Finally, participants were presented with debriefing information. The study was completed when the participant closed their internet browser. There was no opportunity for participants to return to previously completed questions. The data were collected securely and collated in an encrypted MS Excel spreadsheet.

Findings

Below, we present a quantitative analysis of the *number* of perceived benefits and drawbacks that participants provided for each of the three behaviors, followed by a qualitative analysis of the *nature* of these benefits and drawbacks.

Number of Perceived Benefits and Drawbacks

Table 1 presents the average number of benefits and drawbacks that participants provided for each of the three violent extremist behaviors. Paired samples *t*-tests revealed that participants perceived on average significantly more drawbacks than benefits of accessing a violent extremist website ($t[52] = 3.52$, $p = .001$, $d = .46$), and joining a violent extremist group ($t[48] = 4.71$, $p < .001$, $d = .62$; see Table 1). By contrast, there was no significant difference in the average number of perceived benefits and drawbacks of leaving a violent extremist group ($t[54] = .98$, $p = .332$, $d = .13$; see Table 1).

Table 1 about here

Nature of Perceived Benefits and Drawbacks

The first qualitative responses were thematically analyzed. The first author read through all of the responses and created meaningful categories that were apparent for the benefits and drawbacks of each of the three violent extremist behaviors. Categories with less than 3% of responses across any of the three behaviors were coded as 'other.' Both authors then independently coded participants' responses into these categories. Initial inter-coder agreement was high (i.e., from 87% to 98%). The few disagreements were discussed and agreed upon. Following this, an external coder was consulted who had no involvement in the study. Agreement between the authors' agreed codes and the external coder was high (i.e., from 85% to 100%). The few disagreements were discussed and agreed upon.

Excluding the 'other' categories, a total of 17 different categories of benefits emerged. Ten of these applied to accessing a violent extremist website, 11 to joining a violent extremist group, and nine to leaving a violent extremist group (see Table 2). A total of 13 different categories of drawbacks emerged, with 10 for accessing, and 11 each for joining and leaving (see Table 3). Tables 2 and 3 present the proportion of responses that fell into each category of benefit and drawback, respectively, for the three violent extremist behaviors. The findings are summarized below by the three stages of (dis)engagement.

Tables 2 and 3 about here

Initial involvement. The most common perceived *benefit* of accessing a violent extremist website, representing 55.9% of responses, was that it would enable participants to 'gain knowledge, awareness, insight or understanding' of the topic. With regard to the perceived potential *drawbacks* of accessing a violent extremist website, the two most common categories, representing 20.1% and 21.3% of responses respectively, were being 'exposed to negative material' and 'experiencing negative emotions.'

Engagement. 'Being part of a group or with similar people' was the most common perceived *benefit* of joining a violent extremist group, representing 32.0% of responses. The second most common benefit was that this enabled one to 'fight the enemy, fight for a cause, take action, or make a difference or impact', which represented 16.5% of responses. The two most common perceived *drawbacks* of joining a violent extremist group were that it 'encourages violence, criminal beliefs or behaviors' and that participants might 'get in

trouble with the criminal justice system', representing 19.4% and 16.1% of responses, respectively.

Disengagement. Finally, the two most common perceived *benefits* of leaving a violent extremist group referred to 'no longer being a terrorist or criminal, or no longer committing illegal acts' and 'regaining autonomy or independence, or no longer being manipulated or pressured', which represented 20.7% and 20.7% of responses, respectively. The two most common perceived *drawbacks* of leaving a violent extremist group referred to 'experiencing reprisal or retaliation and being disliked' and 'exposing oneself to danger or harm', representing 24.2% and 16.7% of responses, respectively.

Discussion

The fact that violent extremism is currently considered to be one of the greatest threats to national and international security means that it deserves research attention. However, there is a surprising lack of primary data on violent extremism, and that which exists has often been criticized on methodological grounds (Dhami, 2014; Victoroff, 2005). This has severely limited the ability of policy-makers to develop and implement effective prevention and intervention strategies (Lum et al., 2006).

The present study represents a first step in designing systematic scientific research that can be used to test the utility of rational choice theory in describing and explaining violent extremism. According to some criminologists, this has potential value for reducing terrorism (Clarke & Newman, 2009). Precise tests of the theory first require specification of the pros and cons that individuals perceive may potentially arise from this risky behavior. Thus, in the present study we provide a glimpse of how male youth perceive the benefits and

drawbacks of *accessing* a violent extremist website, *joining* a violent extremist group, and *leaving* such a group. Our study explores the stages and levels of engagement that have been of interest to policy-makers (e.g., HM Government, 2011).

Compatible with studies of youth risk perceptions and risk taking in the crime and other domains (Beyth-Marom et al., 1993; Dhami & Garcia-Retamero, 2012), participants in the present study thought of more drawbacks than benefits of accessing a violent extremist website and joining a violent extremist group. Although these perceptions do not necessarily have a deterrent impact (as demonstrated in past research where participants nevertheless had high levels of past and intended risk taking), it does indicate that male youth are aware of the negative consequences of engagement in violent extremism. Follow-up research is needed to establish whether this provides evidence of the effectiveness of current Government awareness raising campaigns or whether this suggests that such campaigns are unnecessary because youth perceptions may have been informed by other sources (e.g., parents, media).

Overall, we found that the nature of the perceived benefits was more varied than were the drawbacks. Across the three risky behaviors, there were 16 meaningful categories of perceived benefits compared to 13 categories of perceived drawbacks. This suggests that prevention and intervention strategies based on deterrence via increasing costs may have to be more restricted in their scope than those based on reducing rewards.

The most commonly perceived *benefit* of accessing a violent extremist website was that it would help participants 'gain knowledge/awareness/insight/understanding' of the violent extremist group and their motivations. Indeed, access to, and use of, extremist websites may act as one factor contributing to initial involvement in violent extremism

(Hegghammer, 2006; Helmus et al., 2013). These websites present ideological arguments that culminate in support for violence (Gerstenfeld, Grant, & Chiang, 2003), and individual's espousing such beliefs are considered to be at greater risk of engaging in violent extremism (Monahan, 2012; Pressman, 2009). For those individuals who are not already socially connected, exposure to new ideas such as these is a potential factor putting them at risk of radicalization (McCauley & Moskalenko, 2011).

In terms of perceived *drawbacks* of accessing a violent extremist website, participants noted that they could 'be exposed to negative material' and 'experience negative emotions' such as annoyance, anger, worry, upset, fear and disgust. The idea that negative emotions may act as a deterrent runs contrary to the current view that these emotions are potential motivational 'risk' factors (Horgan, 2008; Monahan, 2012). Future research ought to tease apart the causal relation between negative emotions and (dis)engagement in violent extremism.

The most commonly perceived *benefits* of joining a violent extremist group were that the individual would 'become part of a group/be amongst similar people,' and that he could 'fight the enemy/for a cause/take action/make a difference/impact'. Personal affiliations have been found to be associated with joining a violent extremist group (Hegghammer, 2006). In addition, Pressman (2009) notes that contextual factors such as contact with violent extremists and a community that is supportive of political or ideologically motivated violence may encourage engagement in violent extremist activities (see also Ginges, Atran, Sachdeva, & Medin, 2011; Horgan, 2008; Monahan, 2012). Similarly, the belief that one must right a wrong or has a grievance has also been identified as a factor potentially increasing the

likelihood that an individual may engage in violent extremism (McCauley & Moskalenko, 2011; Monahan, 2012; Pressman, 2009).

The most commonly cited *drawbacks* of joining a violent extremist group were that it 'encourages violent/criminal beliefs/behavior' and that individuals would 'get in trouble with the criminal justice system' (i.e., be arrested, convicted, sentenced). The latter supports research showing that youth may perceive negative social reactions involving official sanctions as drawbacks of committing crime (e.g., Beyth-Marom et al., 1993; Dhami & Mandel, 2012a), and that violent extremists also may disengage because they believe the drawbacks of formal sanctions no longer outweigh the benefits of engagement in violence.

In sum, the present study has provided preliminary data from which a rational choice model may be constructed and tested. It does not directly examine choice or the relations between risk perceptions and risk taking or choice. Future research can build on our findings by asking individuals to state how much importance (value) they attach to the specific benefits and drawbacks that we have identified, and to state what their subjective likelihood is of occurring. This data can then be used to test the validity of a rational choice model (i.e., weighting and integration of the pros and cons) in predicting variables such as support for, and attitudes towards, violent extremism, as well as intentions to (dis)engage in violent extremism. Studies using known violent extremists could also aim to predict their past level of engagement.

If future research demonstrates that perceived benefits and drawbacks are predictive of accessing a violent extremist website and joining a violent extremist group, our findings suggest that prevention and intervention strategies could be two-pronged: reducing the

perceived sense of reward or providing specific rewards (e.g., need for belonging and group affiliation) in legal ways, as well as demonstrating the swiftness, severity and certainty of formal punishment. Furthermore, these strategies ought to be behavior-specific (e.g., accessing a violent extremist website v. joining a violent extremist group).

With regard to leaving a violent extremist group, there was no significant difference in the number of the perceived benefits and drawbacks. We found that the most commonly cited *benefits* of leaving a violent extremist group were that individuals would 'no longer be a terrorist/criminal or commit illegal acts' and they could 'gain autonomy/independence and not be manipulated/pressured'. Indeed, individuals in extremist groups can experience immense peer pressure (Hegghammer, 2006).

The most commonly perceived *drawbacks* of leaving a violent extremist group were that individuals might 'experience reprisal/retaliation/dislike' from the group and they might 'expose themselves to danger/harm.' The threat from within the group is not unrealistic as there are many documented examples of in-fighting and competition in such groups (McCauley & Moskalenko, 2008).

Disengagement from violent extremism may occur due to a change in function within the violent extremist group; a sense of de-radicalization where the individual socially and psychologically reduces his/her commitment to the group; a loss of social ties within the group; and disillusionment between the fantasy and reality of engagement (Bjorgo, 2011; Garfinkel, 2011; Horgan, 2008). Our findings suggest that although individuals see benefits to disengagement, they also see the potential for violence being directed at them. This underscores the need for preventive action, since individuals who join a violent extremist

group may find it difficult to leave for these reasons. Again, if future research demonstrates that the above perceived benefits and drawbacks of leaving a violent extremist group predictive (dis)engagement in violent extremism, intervention strategies could be designed to help individuals perceive greater benefits of leaving, and they can aid disengagement via providing safety and security (Garfinkel, 2007).

Potential Limitations and Further Directions for Future Research

Some critics may argue that our sample of male youth was unrepresentative of violent extremists because they were predominately non-Muslim, white and British. We did not specifically target non-British, Muslim minorities because to do so would be viewed as invoking racial stereotyping. Such stereotypes run contrary to the official police statistics which show that, in 2010, individuals of white origin were approximately four times more likely to be stopped and searched under the Terrorism Act 2000 than those of an Asian or Asian British origin (Home Office, 2012). A report by the Security Service confirms that violent extremists in the UK cannot be profiled in terms of race, nationality or religion, and that it is important to adopt a broad analysis in this domain. Most British Muslims are not extremists and that they do not support extremism. In addition, the fact that participants in the present study were not explicitly instructed to think of any specific violent extremist group also meant that responses were applicable to a wider range of participants (including British, non-Muslims). We therefore believe it is important for research on violent extremism (particularly when it is of an exploratory nature) not to confound the concept with other variables such as race, religion and nationality (e.g., HM Government, 2011), and to adopt a broad definition of extremism.

Nevertheless, in hindsight it may have been useful to have asked our participants which violent extremist groups they had in mind. This would have enabled us to compare responses across different types of violent extremist groups. Future research should overcome this limitation. In addition, future research could also involve participants who might be at greatest risk of radicalization and engagement in violent extremism, although this might be challenging given the lack of an effective risk assessment tool in this domain (Monahan, 2012). However, there are some factors such as ideology, affiliations, grievances, and moral emotions (Monahan, 2012) that may be used to 'screen and select' participants. Future research can also focus on those who have known to be (dis)engaged in violent extremism, although this may prove difficult as gatekeepers may prevent access to incarcerated populations (although such samples may be criticized for being unrepresentative of offending populations) and sampling from 'sleeper cells' is associated with safety, legal and ethical concerns.

As stated at the outset, our research was inspired by a desire to provide a basis for testing a rational choice model of violent extremism. We acknowledge that there are other potentially useful theoretical approaches, and researchers could explore the value of applying those. For instance, recent research suggests that (de)radicalization may be understood in terms of an individual's motivation to achieve personal significance, combined with an ideology stating violence is appropriate for pursuing this goal, and in the context of social networks reinforcing and enabling this (Kruglanski, Gelfand, Belanger, Sheveland, Hetiarachici, & Gunaratna, 2014).

In a direct test of rational choice theory, other research suggests that the rational choice model may not be valid in predicting youths' intentions to engage in criminal or other risky activities (e.g., Dhami & Mandel, 2012a; 2012b). Rather than carefully weighing up the

pros and cons of risky behaviors, youth may be solely motivated by the importance they attach to the perceived benefits, irrespective of their probabilities of occurrence and despite the perceived drawbacks. In fact, the impact of perceived drawbacks tends to be weaker than is implied by prevention strategies that focus on informing young people about the costs of risk taking (D'Amico & Fromme, 2002).

While there is evidence to suggest that decisions in other domains are either not based on rational analyses of costs and benefits (e.g., Mazar & Arley, 2006), or that they are not based on conscious insights into a person's own decision-making (e.g., Burroughs, Chaplin, Pandelaere, Norton, Ordabayeva, Gunz, & Dinauer, 2013), the number and richness of the insights provided by the present study's participants indicates that empirical research investigating a model of rational choice for the decision to access, join and leave a violent extremist group may be warranted. The fact that the interpretation of costs and benefits might be affected by ideological contexts (e.g., death may be a reward under a Jihadi ideology but a drawback under another ideology) means that the value of rational choice approach may, however, be limited. To improve our understanding of violent extremism, developing and empirically testing models from both existing and new paradigms is essential.

Models can also be extended to incorporate the findings of research suggesting that risk perceptions and risk taking may be influenced by non-cognitive factors. In the domain of violent extremism, these may include emotions such as anger or disgust (McCauley & Moskalenko, 2011; Pressman, 2009). It would be useful to identify the non-cognitive factors, such as emotions, that may impact individuals' risk perceptions (i.e., importance and likelihood of the pros and cons). Hsee (1999) demonstrated that people make decisions about the future based on rational arguments but used emotions to make decisions about the

present. Thus, future research could also examine the effect of temporal context on individuals' perceptions of the benefits and drawbacks of violent extremism. Finally, 'sacred values' or 'moral rules' may also affect or even override careful cost-benefit calculations (Ginges et al., 2011). Thus, future psychological research can ask: 'How rational are violent extremists?' and 'What influences their rationality?' These questions are not only of theoretical interest, but also of practical value since deterrence-based prevention strategies hinge on rational choice models of the offender (Clarke & Newman, 2009).

In conclusion, current UK-based strategies for dealing with violent extremism include challenging ideology (HM Government, 2011), and identifying potentially vulnerable youth (such as those at University) and supporting them via counselling, faith guidance, civic engagement, working with their support networks, and providing education, employment, health and housing services (HM Government, 2010). These have been criticized for lacking an empirical or scientific evidence-base (Dhami, 2014). As Victoroff (2005) argues, even when policy-makers rely on the published research on the "mind of the terrorist", "policies intended to reduce the risk of terrorism may be based on invalid premises" (p. 34). This is because past research has not been sufficiently hypothesis-based. The present study provides an insight into how male youth think about the pros and cons of (dis)engagement in violent extremism, and so can contribute to the sort of systematic theory testing research necessary for developing scientific evidence-based prevention and intervention strategies.

References

Agnew, R. (2010). A general strain theory of terrorism. *Theoretical Criminology, 14*, 131-153. doi: 10.1177/1362480609350163

Bakker, E. (2006). *Jihadi terrorists in Europe*. The Hague: Netherlands Institute of International Relations Clingendael. Available at: http://www.clingendael.nl/sites/default/files/20061200_cscp_csp_bakker.pdf

Beyth-Marom, R., Austin, L., Fischhoff, B., Palmgren, C., & Jacobs-Quadrel, M. (1993). Perceived consequences of risky behaviors. *Developmental Psychology, 29*, 549-563. doi: 10.1037/0012-1649.29.3.549

Bishop, B., Cooper, A., & Hillygus, D. S. (2009). *Innovative survey methodologies for the study of attitudes toward terrorism and counterterrorism strategies*. Institute for Homeland Security Systems: Duke University. Available at: http://sites.duke.edu/ihss/files/2011/12/Bishop_Cooper_Hillygus_SurveyMethodsLitReview.pdf

Bjørgo, T. (2011). Dreams and disillusionment: Engagement in and disengagement from militant extremist groups. *Crime, Law and Social Change, 55*, 277-285. doi: 10.1007/s10611-011-9282-9

Borum, R. (2011). *Understanding terrorist psychology*. In Silke, A. (Ed.), The psychology of counter-terrorism (pp.19-33). Oxon, UK: Routledge.

Burroughs, J. E., Chaplin, L. N., Pandelaere, M., Norton, M. I., Ordabayeva, N., Gunz, A., & Dinauer, L. (2013). Using Motivation Theory to Develop a Transformative Consumer Research Agenda for Reducing Materialism in Society. Journal of Public Policy & Marketing, 32(1), 18-31. doi: doi:10.1509/jppm.10.046

Clarke, R. V., & Newman, G. R. (2009). *Reducing the opportunities for terrorism: Applying the principles of situational crime prevention*. In Stritzike, W. et al. (Eds.), Terrorism

and torture: An interdisciplinary perspective (pp. 86-105). Cambridge, UK: Cambridge University Press. doi: 10.1017/CBO9780511581199.006

Cooper, H. H. A. (1978) Psychopath as terrorist. *Legal Medical Quarterly, 2*, 253-262.

Cornish, D. B., & Clarke, R. V. (1986). *The reasoning criminal*. New York: Springer-Verlag. doi: 10.1007/978-1-4613-8625-4

D'Amico, E. J. & Fromme, K. (2002). Brief prevention for adolescent risk-taking behavior. *Addiction, 97*, 563-574. doi: 10.1046/j.1360-0443.2002.00115.x

Davies, J. C. 1973. *Aggression, violence, revolution and war*. In J. N. Knutson (Ed.), Handbook of political psychology (pp. 234-260). San Francisco: Jossey-Bass.

Dhami, M. K. (2014). *A scientific approach to countering the terrorist threat*. In J. Cole & R. Pantucci (Eds.), Community tensions (pp. 9-17). STFC/RUSI Conference Series No. 3. London: RUSI and STFC.

Dhami, M. K., & Garcia-Retamero, R. (2012). Spanish young adults' perceptions of the costs and benefits of risky driving. *The Spanish Journal of Psychology, 15*, 638-647. doi: 10.5209/rev_SJOP.2012.v15.n2.38875

Dhami, M. K., & Mandel, D. R. (2012a). Crime as risk taking. *Psychology, Crime and Law, 18*, 389-403. doi: 10.1080/1068316X.2010.498423

Dhami, M. K., & Mandel, D. R. (2012b). Forecasted risk taking in youth: Evidence for a bounded-rationality perspective. *Synthese, 186*, 161-171. doi: 10.1007/s11229-012-0110-2

Finucane, M. L., Alhakami, A., Slovic, P., & Johnson, S. M. (2000). The affect heuristic in judgments of risks and benefits. Journal of Behavioral Decision Making, 13, 1–17.

Fischhoff, B., Gonzalez, R. M., Lerner, J. S., & Small, D. A. (2005). Evolving judgments of terror risks: foresight, hindsight, and emotion. *Journal of Experimental Psychology: Applied, 11*, 124–139.

Garfinkel, R. (2007). *Personal transformations: Moving from violence to peace*. Washington, USIP. Available at: http://www.usip.org/sites/default/files/resources/sr186.pdf

Gerstenfeld, P. B., Grant, D. R., & Chiang, C. (2003). Hate online: A content analysis of extremist interest sites. *Analyses of Social Issues and Public Policy, 3*, 29-44. doi: 10.1111/j.1530-2415.2003.00013.x

Ginges, J., Atran, S., Sachdeva, S., & Medin, D. (2011). Psychology out of the laboratory: The challenge of violent extremism. *American Psychologist, 66*, 507-519. doi: 10.1037/a0024715

Glees, A., & Pope, C. (2005). *When students turn to terror: How safe are British universities*. London: Social Affairs Unit.

Gruber, J. (Ed.). (2001). *Risky behavior among youths. An economic analysis*. Chicago, IL: University of Chicago Press.

Hampson, S. E., Severson, H. H., Burns, W. J., Slovic, P., & Fisher, K. J. (2001). Risk perception, personality factors and alcohol use among adolescents. *Personality and Individual Differences, 30*, 167–181. doi: 10.1016/S0191-8869(00)00025-8

Hannah, G., Clutterbuck, L., & Ruben, J. (2008). *Radicalization or rehabilitation: Understanding the challenge of extremist and radicalized prisoners*. Santa Monica, CA: RAND.

Hegghammer, T. (2006). Terrorist Recruitment and Radicalisation in Saudi Arabia. *Middle East Policy, 13*, 39-60. doi: 10.1111/j.1475-4967.2006.00269.x

Helmus, T. C., York, E., & Chalk, P. (2013). *Promoting online voices for countering violent extremism*. Santa Monica, CA: RAND.

HM Government (2010). *Channel: Supporting individuals vulnerable to recruitment by violent extremists*. London: Home Office.

HM Government (2011). *Prevent strategy*. Cm 8092. London: The Stationery Office Limited.

Hodgson (2012). *On the limits of rational choice theory.* Economic Thought, 1(1), 94-108.

Available at: http://et.worldeconomicsassociation.org/

Home Office (2012). *Operation of police powers under the Terrorism Act 2000 and subsequent legislation: Arrests, outcomes and stops and searches*. HOSB: 04/12. London: Home Office.

Horgan, J. (2008). From profiles to pathways and roots to routes: Perspectives from psychology on radicalization into terrorism. *The ANNALS of the American Academy of Political and Social Science, 618*, 80-94. doi: 10.1177/0002716208317539

Hsee, C. K. (1999). Value seeking and prediction-decision inconsistency: Why don't people take what they predict they'll like most? *Psychonomic Bulletin & Review, 6(4)*, 55-561. Available at http://link.springer.com/journal/13423.

Kruglanski, A. W., Gelfand, M. J., Belanger, J. J., Sheveland, A., Hetiarachici, M., & Gunaratna, R. (2014). The psychology of radicalization and deradicalization: How significance quest impacts violent extremism. *Political Psychology, 35, 69-93.* doi: 10.1111/pops.12163

Levenson, R. W., Carstensen, L. L., Friesen, W. V., & Ekman, P. (1991). Emotion, physiology, and expression in old age. *Psychology and Aging*, 6, 28-35.

Loewenstein, G. F., Hsee, C. K., Weber, E. U., & Welch, N. (2001). Risk as feelings. *Psychological Bulletin, 127*, 267-286.

Lum, C., Kennedy, L. W., & Shirley, A. (2006). Are counter-terrorism strategies effective? The results of the Campbell systematic review on counter-terrorism evaluation research. *Journal of Experimental Criminology, 2*, 489-516. doi: 10.1007/s11292-006-9020-y

Mazar, N., & Ariely, D. (2006). Dishonesty in Everyday Life and Its Policy Implications. Journal of Public Policy & Marketing, 25(1), 117-126. doi: doi:10.1509/jppm.25.1.117

McCauley, C., & Moskalenko, S. (2008). Mechanisms of political radicalization: Pathways toward terrorism. *Terrorism and Political Violence, 20*, 425-433. doi: 10.1080/09546550802073367

Merari, A. (2010). *Driven to death: Psychological and social aspects of suicide terrorism*. Oxford: Oxford University Press.

Monahan, J. (2012). The individual risk assessment of terrorism. *Psychology, Public Policy, and Law, 18*, 167-205. doi: 10.1037/a0025792

Post, J. (1998). *Terrorist psycho-logic: Terrorist behavior as a product of psychological forces*. In Reich, W. (Ed.), Origins of Terrorism, Washington, DC: Woodrow Wilson Centre.

Pressman, E. (2009). *Risk assessment decisions for violent political extremism*. User Report 2009-02. Ottawa: Public Safety Canada. Available at: http://www.publicsafety.gc.ca/cnt/rsrcs/pblctns/2009-02-rdv/2009-02-rdv-eng.pdf

Victoroff, J. (2005). The mind of the terrorist: A review and critique of psychological approaches. *The Journal of Conflict Resolution, 49*, 3-42. doi: 10.1177/0022002704272040

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and Validation of brief measures of positive and negative affect: The PANAS Scales. Journal of Personality and Social Psychology, 54, 1063-1070.

Endnotes

[1] It is outside the scope of the present paper to conduct a comprehensive review of the empirical research on terrorism and violent extremism, and so interested readers are referred to Victoroff (2005) and Monahan (2012) for reviews of the various other psychological theories and research.

[2] It must be acknowledged that the rational choice approach has been challenged by scholars within the field of behavioral economics, among others. A full discussion of the proposed limitations beyond the scope and main aim of the present paper, and interested readers are directed to Hodgson (2012).

[3] Another goal was to examine how feelings of anger might affect perceptions. Research shows that risk perceptions and risk taking may be affected by emotions (Finucane, Alhakami, Slovic, & Johnson, 2000; Loewenstein, Weber, Hsee, & Welch, 2001), and that negative emotions such as anger may be particularly useful in understanding thoughts about violent extremism or terrorism (Fischhoff, Gonzalez, Lerner, & Small, 2005). We used an adapted version of the Relived Anger Memory Task (RAM; Levenson, Carstensen, Friesen, & Ekman, 1991) to induce anger in a random half of the participants. The effectiveness of this anger induction task was tested using three items from the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988) that measure externally directed anger. An independent samples t-test revealed that the anger manipulation was unsuccessful. Independent samples t-tests also revealed no significant differences in the average number of benefits and drawbacks perceived by participants in the anger and control conditions, for any of the three violent extremist behaviors, ps > .05. In addition, chi-square analyses showed that Group (angry v. control) was not associated with the categories of benefits or drawbacks

perceived by participants for any of the three violent extremist behaviors, ps > .05. Therefore, we will not discuss this aspect of the study further in the present paper.

[4] The reliability of responses might also be affected by the participant-researcher interaction. For instance, given the political, religious, racial and ideological motivations of violent extremists, participants may not wish to divulge information to researchers who are of a specific race, gender, nationality or apparent religion. Thus, online data collection can also reduce the likelihood of the researcher's demographic characteristics affecting response patterns.

Tables

Table 1. Average Number of Benefits and Drawbacks of Violent Extremism Provided by

Male Youth

Behaviors	Benefits		Drawbacks		
	M	*SD*	*M*	*SD*	*SD* of within-subjects difference
Accessing a violent extremist website[*]	2.1	1.8	2.9	1.7	1.7
Joining a violent extremist group[*]	2.1	2.0	3.3	1.8	1.8
Leaving a violent extremist group	2.4	1.5	2.2	1.8	1.7

Note. [*]$p \leq .001$.

Table 2. Percentage of Perceived Benefits of Violent Extremism

Category*	Percentage		
	Accessing	Joining	Leaving
Gain knowledge/awareness/insight/understanding	55.9	9.7	2.2
Become part of a group/similar people	12.6	32.0	0.7
Make a difference/be part of cause	1.8	4.9	0
Increase positive emotions	2.7	4.9	8.9
Fight the enemy/for cause/take action/make difference/impact	0.9	16.5	0
Deal with negative emotions	3.6	5.8	2.2
Get opinions across	2.7	1.0	0
Gather intelligence (evidence)	5.4	1.0	1.5
Opportunity to commit crime/benefit from it	0.9	3.9	0
Be supported/protected	0	7.8	0
Prevent terrorism/crime	1.8	1.9	0
Be safe/out of danger	0	1.0	8.9
Reduce chances of being caught and punished by criminal justice system	0	0	7.4
No longer be a terrorist/criminal/commit illegal acts	0	0	20.7
No more secret life/be normal/back with family and friends	0	0	10.4
Gain autonomy/independence and not be manipulated/pressured	0	0	20.7
Other	11.7	9.7	16.3

Note. Columns may not sum to 100% due to rounding off. [*]The category "gain knowledge/awareness/insight/understanding" refers to participants wanting to gain general information. For instance, when referring to the benefit of accessing an extremist website one participant said "get more of a picture about what people who are terrorists think". The category "gain intelligence/evidence" refers to participants wanting to obtain information pertaining to a specific terrorist plan of action. For example, when referring to the benefits of accessing an extremist website one participant said "knowing if and where a terrorist attack will be".

Table 3. Percentage of Perceived Drawbacks of Violent Extremism

	Percentage		
Category	Accessing	Joining	Leaving
Get in trouble with CJS	5.5	16.1	1.7
Be ostracized	2.4	10.6	10.0
Be manipulated/influenced/pressured	9.8	12.2	0.8
Be labelled/judged	6.7	10.6	8.3
Be exposed to negative material	20.1	0.6	0
Personal details associated with site/monitored	6.7	0	0
Experience negative emotion	21.3	5.6	6.7
expose self to danger/harm	0.6	10.0	16.7
Experience reprisal/retaliation/dislike	0	0.6	24.2
Be excluded/lose group and their support	0	0	8.3
Harm to family	0	1.1	2.5
Encourages violent/criminal beliefs/behavior	11.0	19.4	1.7
Not be able to leave	0.6	1.1	6.7
Other	15.2	12.2	12.5

Note. Columns may not sum to 100% due to rounding off.